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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS

In re application of:

BENSON et al.

Application No.: 09/679,948

Filed: November 4, 2000

For: System and Method for Manipulating Digital Images

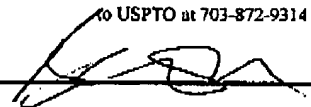Examiner: Good Johnson, Motilewa

Art Unit: 2672

APPELLANT'S BRIEF UNDER

37 C.F.R. §1.192

I certify that this document was sent by fax

to USPTO at 703-872-9314 on Feb. 14, 2004

Buo Tran

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sirs:

Appellant offers this Appeal Brief in furtherance of the Notice of Appeal filed on December 1, 2003 in the above-referenced patent application. Please deduct the requisite fee, pursuant to 37 C.F.R. § 1.17(c), of $160 from deposit account 501861, and deduct any additional fees or credit any excess fees associated with the Appeal Brief to such deposit account. Appendix A, attached hereto, contains a copy of all claims pending in this case.

REAL PARTY IN INTEREST

All right, title, and interest in the subject invention and application are assigned to Shutterfly, Inc., having offices at 2800 Bridge Parkway, Suite 101, Redwood City, CA 94065. Therefore, Shutterfly, Inc. is the real party interest.

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BENSON et al.
Application No.: 09/679,948   PATENT
Page 2

RELATED APPEALS AND INTERFERENCES

No other appeals or interferences are known which will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal.

STATUS OF THE CLAIMS

Claims 1-45 were originally presented in the application. Claims 1-45 have been rejected and are the subject of this appeal. No other claims are pending.

STATUS OF AMENDMENTS

A Final Office Action was mailed on September 29, 2003. No amendment has been filed in response to the Final Office Action. A copy of all the pending claims is provided in Appendix A, attached hereto.

SUMMARY OF THE INVENTION

The present invention is related generally to distributing images. In one aspect, the invention allows images to be edited and the specified edits are saved as metadata and the original image is not altered. During review of an edited/manipulated image, the original image is retrieved and metadata specifying the edit changes are applied to the original image to arrive at the edited image. The metadata is generated at the user's local computer, and the metadata is updated to a remote server that archives the image and the metadata. In this manner, the original image is read-only so that the user can always revert to the original image if needed.

Aspects of the invention can include one or more of the following features. The synchronizing step can include updating local client software for manipulating the image. The manipulating step can include manipulating a proxy image asscociated with the image. The proxy image can be a lower or higher resolution image than the image. The step of manipulating the proxy image can include creating metadata describing the manipulations to the image, applying the metadata to the proxy image and displaying the modified proxy image. The manipulating step can include displaying to the user a modified image including selecting between the image and a proxy image, modifying the selected image in accordance with the manipulation parameters, and displaying the modified selected image. The method can include storing the metadata as a file associated with the image at each of the local client computer and the remote server. The metadata can include rotation information, cropping information and user interface state information. The step of manipulating the parameters can include capturing state information defining a state of the manipulations at a predefined time and selecting a previous state at the request of the user. The method can include capturing a history of the state information and selecting any of the previous states without traversing back through each intermediary state in the history. The parameter that can be manipulated can be selected from image parameters, account parameters and order parameters. The image parameters can include the state of the user interface, image archival information, annotation information, backprint information and order information. The order information can include pricing information. The method can include defining a personal template that describes a particular configuration for the parameters for a given image and wherein the image parameters includes an identifier pointing to the personal template. The account parameters can include verification data for the client. The order

parameters can include envelope information. The synchronization step can be bi-directional. The synchronization step can include checking for conflicts between metadata stored at the local client computer and the remote server and upon detecting a conflict, alerting the user to the conflict. The method can include receiving a selection from the user regarding the client and synchronizing the local client computer and remote sever in accordance with the selection. When a conflict arises, two different states of the metadata at each of the local client computer and the remote server, one for each of the conflicting parameters, can be stored. The step of alerting the user can include displaying a dialog box to the user from which a selection can be made. The method can include storing on the local client computer a printer output file including profiles for different printers available through the remote server, wherein the step of manipulating the parameters includes displaying a modified version of the original image in accordance with the manipulated parameters and using an output profile for a printer on which the image is to be outputted when transferred to the remote server. The method can include displaying on both the local client computer and the remote server a similar image metaphor for manipulating the original image. The image metaphor can include an envelope for dropping selected images into when ordering. The method can include prompting the user to experience a new remote server function including loading a copy of a tool onto the local client computer during the synchronization step and displaying an icon in the user interface that alerts the user to the new functionality and includes a link to the local copy of the tool to allow the user to manipulate an image using the new functionality. The method can include storing metadata describing the manipulations without modifying the image, the metadata being stored at the computer, either the local client or the remote server, where the manipulating step is performed. The local client computer can be selected from the group of PDA, portable computer, kiosk, fax machine, digital camera and docking station. The connection between the local client computer and remote server can be wireless. The synchronization step can occur in real-time, at a next open session or at the end of a session between the local client computer and the remote server. he synchronization step occurs in real time between the local client computer and remote server. The parameters can include print parameters and display parameters. The print parameters can include print calibration parameters.

The proposed client-based software tracks the processing changes by the user on each particular image. The software also offers an incremental undo function so that the user can change back to a previous image state if he/she decides to try something different. The history of the image processing and undo functions is stored and synchronized between the client computer and online server so that it can be used analogously on both the web (e.g., the server) and the client computer.

Personal templates can be saved that define a particular set or chain of image processing operations often used by a user. The metadata file can also include the states (i.e. the user interface (UI) settings) of the UI at the time the image operations are invoked by the user. Unique UI state information can be associated with each image. The UI states can be transferred from the client to the server along with the source image. If the source image is already stored in the user account on the server, only the metadata file needs to be transferred to the server and updated in the user account. The preservation and storing of the UI states allows the user to recover the exact display condition he/she created on a different client computer or on the website.

Each time a connection to the user's account at the online photofinisher's website is made, the state information of the user account is updated on the user computer and on the web. The state information can include image transfers or upload, the transfer of an image file name, image

BENSON et al.
Application No.: 09/679,948   PATENT
Page 4

processing information, image archival information, annotation and back printing information, UI state information, personal template, and order information. The input information on the user's computer can be automatically uploaded to the user account on the web.

ISSUES

I. Whether claims 1-45 are unpatentable under 35 U.S.C. § 103(a) over Ofoto.com in view of Bowman-Amuah (6,477,580).

GROUPING OF THE CLAIMS

For each ground of rejection that appellant contest herein, which applies to more than one claim, such additional claims, to the extent separately identified and argued below, stand or fall together.

ARGUMENT

I. Whether claims 1-45 are unpatentable over Ofoto.com and Bowman-Amuah under 35 U.S.C. § 103.

Claims 1-45 were rejected over Ofoto in view of Bowman-Amuah. The standard for a Section 103 rejection is stated in MPEP Section 706.02(j) is as follows:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must

BENSON et al.
Application No.: 09/679,948
Page 5

expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP § 2144 - § 2144.09 for examples of reasoning supporting obviousness rejections.

THE REFERENCE ON ITS FACE IS NOT PRIOR ART

In the instant case, the Office Action relied on web pages of Ofoto Help: OfotoNow 2.1 dated March 18, 2003 as prior art. The prior art is defined by Title 35, United States Code, Section 102, which states that a person is not entitled to a patent if the invention was "known or used by others in this country, or was patented or described in a printed publication in this or a foreign country" before the date of invention by the applicant for the patent.

On its face, the reference is not prior art. Although the copyright on the web site recited 1999-2003, **it is common for a software producer to mark the copyright with the date starting from the first version of the software, regardless of new features added in later versions. There is no showing of the pages dated March 18, 2003 that OfotoNow 2.1 is prior art to the instant invention.** Clear and convincing proof of the prior art status of OfotoNow 2.1 needs to be provided, or the rejection should be withdrawn.

THE REFERENCE SINGLY OR IN COMBINATION DOES NOT RENDER THE CLAIMS OBVIOUS

Even if the reference could be considered to be prior art, it cannot render the claims obvious. The Office Action asserted, among others, that Ofoto discloses:

> editing the photo, Help: Ofoto Now 2.1, page 2, and discloses altering a copy of the photo rather than the original photo, Help: Ofoto Now 2.1, page 5; and synchronizing the local client computer and remote server ... Ofoto discloses uploading the photo on the remote server from the local client, Help: Ofoto Now 2.1, pages 6-7. Page 3 of Office Action.

By noting that "discloses altering a copy of the photo rather than the original photo," the Office Action here admits that Ofoto is contrary to the teaching of the instant invention. Here, Page 5 of OfotoNow 2.1 specifically noted that:

BENSON et al.
Application No.: 09/679,948   <u>PATENT</u>
Page 6

> When you have used the Trim tool, OfotoNow will ask if you want to save your photo before you do anything else. If you don't want to save your changes, you don't have to. Remember: Using the Save command on the trimmed photo permanently alters the original photo! If you are not sure, work on a copy of the photo rather than the original, or use the Save As command to save a copy of the trimmed photo under a new name, leaving the original photo untouched. Red Eye.

To clarify the differences between Ofoto and the present invention, the example of receiving an image with red-eye problem and correcting the problem before submitting the photo on pages 5-6 of OfotoNow 2.1 is contrasted with the operation of the instant invention as follows:

OfotoNow 2.1	Claim 1
editing the photo Help: Ofoto Now 2.1, page 2	identifying an image for processing at a local client computer;
altering a copy of the photo rather than the original photo, Help: Ofoto Now 2.1, page 5;	manipulating either locally or remotely parameters associated with the image without modifying the image itself;
	sending the image to a remote server;
synchronizing the local client computer and remote server ... Ofoto discloses uploading the photo on the remote server from the local client,	synchronizing the local client computer and the remote server including updating metadata for one of the local client computer and the remote server using metadata of the other.

As shown above, OfotoNow uploads the edited photo. In contrast, the present invention captures edit operations as parameters. The original image is kept intact. Both the parameters and the original image are uploaded to the server. The parameters are uploaded as metadata. Because the original image is saved, the user can undo the changes and/or make additional changes. That capability is simply not present in OfotoNow since it only works with the altered uploaded image.

BENSON et al.
Application No.: 09/679,948   PATENT
Page 7

Ofoto requires the user to work on a copy of the photo rather than the original because saving the change permanently alters the original photo. In contrast, Claim 1 recites "manipulating either locally or remotely parameters associated with the image **without modifying the image itself**; and synchronizing the local client computer and the remote server including updating metadata for one of the local client computer and the remote server using metadata of the other."

In one example, the user "alters" the appearance of the image by changing one or more parameters associated with the image. Only the parameters are then recorded as metadata and the image itself is not modified. For subsequent viewing, the parameters are applied to the original image to arrive at the altered image. Hence, the invention does not modify the image but records the parameters to be subsequently applied to the original image to recreate the altered image. In contrast, Ofoto actually modifies the image and, if the user overwrites the original image with the altered image, the original image is lost. Hence, Ofoto recommends that the user saves the altered image as a different file. Thus, Ofoto cannot manipulating either locally or remotely parameters associated with the image **without modifying the image itself.**

Additionally, as admitted in the rejection, Ofoto is absolutely silent on synchronizing the local client computer and the remote server including **updating metadata for one of the local client computer and the remote server using metadata** of the other. There is no suggestion that this be done in Ofoto because Ofoto does not need to use metadata. Rather, each altered image is saved as a separate, stand-alone file and there is no need for metadata to build the altered image from the original image.

Applicant notes that the present rejection does not establish *prima facie* obviousness under 35 U.S.C. § 103 and M.P.E.P. §§ 2142-2143. The Examiner bears the initial burden to establish and support *prima facie* obviousness. *In re Rinehart*, 189 U.S.P.Q. 143 (CCPA 1976). To establish *prima facie* obviousness, three basic criteria must be met. M.P.E.P. § 2142. First, the Examiner must show some suggestion or motivation, either in the Ofoto reference, Bowman-Amuah, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference so as to produce the claimed invention. M.P.E.P. § 2143.01; *In re Fine*, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Secondly, the Examiner must establish that there is a reasonable expectation of success for the modification. M.P.E.P. § 2142. Thirdly, the Examiner must establish that the prior art references teach or suggest all the claim limitations. M.P.E.P. §2143.03; *In re Royka*, 180 U.S.P.Q. 580 (CCPA 1974). The teachings, suggestions, and

|| BENSON et al.
Application No.: 09/679,948   PATENT
Page 8

reasonable expectations of success must be found in the prior art, rather than in appellant's

disclosure. *In re Vaeck*, 20 U.S.P.Q.2d 1438 (CAFC 1991).

Here, the criteria have not been met: there is absolutely no suggestion or motivation; there

is no expectation of success for the modification, and a plurality of claim limitations are missing.

The office action noted that "Bowman-Amuah discloses sending messages between a

sending system and a receiving system and attaching meta-data to the message. Bowman-Amuah

further discloses the data include identifiers for a type of object, attribute descriptors, and

metadata interpretations, col. 2, lines 19-43." The cited section, the Summary of the Invention,

merely shows:

> A system, method, and article of manufacture are described for providing a self-
> describing stream-based communication system. Messages are sent including data
> between a sending system and a receiving system. Meta-data is attached to the messages
> being sent between the sending system and the receiving system. The data of the
> messages sent from the sending system to the receiving system is translated based on the
> meta-data. The meta-data includes a first section that identifies a type of object associated
> with the data and a number of attribute descriptors in the data and a second section that
> includes a series of the attribute descriptors defining elements of the data.
>
> In one embodiment of the present invention, the sending system and receiving
> system may each be equipped with logic for interpreting the meta-data of the messages.
> In an additional embodiment of the present invention, the elements may be defined in
> terms of size, type, and name.
>
> In another embodiment of the present invention, one of the systems may be an
> object-based system and one of the systems may be a non-object-based system. In a
> further embodiment of the present invention, both of the systems may be object-based
> systems. In even yet another embodiment of the present invention, both of the systems
> maybe non-object-based systems.

Although metadata is mentioned, Bowman-Amuah does not show the specifics of

"synchronizing the local client computer and the remote server including updating metadata for

one of the local client computer and the remote server using metadata of the other."

Here, exemplary operations in one embodiment of the synchronizing operation as

disclosed in the instant application are reproduced below:

> Synchronization is performed between the client computer 104 and server computer 102
> to ensure a seamless experience for the user. No matter where data is manipulated,
> whether account, order or image data, either locally or remotely, a synchronization
> process is executed to allow both remote and local processes to be current.
>
> As described above, synchronization occurs each time a connection to the user's account
> at the online photofinisher's website is made. State information of the user account is
> updated on the user computer and on the web. The state information can include image
> transfers or upload, the transfer of the image file name, image processing information,
> image archival information, annotation and back printing information, UI state
> information, personal template, order information. In one implementation, any input

BENSON et al.
Application No.: 09/679,948
Page 9

PATENT

information on the user's computer will be automatically uploaded to the user account on the web without requiring the user to log onto the website. Specification at page 14.

The cited section of Bowman-Amuah merely shows transmission of metadata. However, it does not show the specifics of independent claim 1 with respect to the synchronizing operation. Hence, this is yet another independent basis for traversing the Section 103 rejection.

The dependent claims are allowable since they depend from allowable independent claims. Moreover, they are allowable since neither Ofoto nor Bowman-Amuah shows the specifics as recited in the dependent claims.

In sum, since Bowman-Amuah does not show the claimed elements recited in claim 1, Applicants submit that neither can render obvious any of the independent claims. The dependent claims are allowable since they depend from allowable independent claims.

With respect to the remaining independent claim 43, Bowman does not show additional details of:

    43.   A method for distributing image editing, review and ordering functions among system resources in an image-processing system, the image-processing system including a local client computer and a remote server, the method comprising:

    Determining if a session is open between the local client computer and the remote server;

    Capturing, at the client computer when the session is closed, metadata describing any manipulations by the user of an image;

    Capturing, at the remote server when the session is opened, metadata describing manipulations of the image by the user; and

    Synchronizing the metadata captured at each of the local client computer and the remote server when the session is open.

    Similarly, Bowman-Amuah cannot anticipate claim 44 as it lacks details of image management, archival and printing as follows:

44.   A method for distributing image editing, review and ordering functions among system resources in an image-processing system, the image-processing system including a local client computer and a remote server, the method comprising:

Dividing image management, archival, and printing functions among the local client computer and the remote server including performing image management at either of the local client computer and the remote server, and performing image archive and printing functions at the remote server; and

Synchronizing image management data between the local client computer and the remote server.

Additionally, Bowman-Amuah lacks the specifics claimed in claim 45:

45.   An apparatus for manipulating a digital image comprising:

Client software for executing on a local client computer including instructions for

identifying an original image for processing at the local client computer,

uploading the original image to a remote server,

receiving a user selection to locally or remotely process the original image;

if local processing is selected, locally manipulating parameters associated with the original image including storing, on the local client computer, metadata describing the manipulations without modifying the original image,

if remote processing is selected, opening a session with the remote server; and

Remote server software for executing on the remote server including instructions for

receiving the original image,

manipulating parameters associated with the original image in accordance with instructions received from the local processor

BENSON et al.
Application No.: 09/679,948   PATENT
Page 11

storing metadata describing the manipulations without modifying the original

image, and

at each session between the local client computer and the remote server,

synchronizing the local client computer and the remote server including updating

metadata for one of the local client computer and the remote server using metadata of the

other.

Hence, Ofoto and Bowman-Amuah, singly or in combination, cannot render claims 1-45

obvious. Withdrawal of the Section 103 rejection is respectfully requested.

CONCLUSION

Appellant believes that the above discussion is fully responsive to all grounds of rejection

set for the in the Final Office Action.

Authorization to charge Deposit Account 501861 is granted.

If for any reason the Examiner believes that a telephone conference would in any way

expedite prosecution of the subject application, the Examiner is invited to telephone the

undersigned.

Respectfully submitted,

/Bao Tran

Reg. 37,955

BENSON et al.
Application No.: 09/679,948   PATENT
Page 12

CLAIMS

1.   A method for manipulating a digital image comprising:

identifying an image for processing at a local client computer;

sending the image to a remote server;

manipulating either locally or remotely parameters associated with the image without modifying the image itself; and

synchronizing the local client computer and the remote server including updating metadata for one of the local client computer and the remote server using metadata of the other.

2.   The method of claim 1 wherein the synchronizing step includes updating local client software for manipulating the image.

3.   The method of claim 1 wherein the manipulating step includes manipulating a proxy image associated with the image.

4.   The method of claim 3 wherein the proxy image is a lower resolution image than the image.

5.   The method of claim 3 wherein the proxy image is a higher resolution image than the image.

6.   The method of claim 3 wherein the step of manipulating the proxy image includes creating metadata describing the manipulations to the image, applying the metadata to the proxy image and displaying the modified proxy image.

7.   The method of claim 1 wherein the manipulating step includes displaying to the user a modified image including

a.   selecting between the image and a proxy image, the proxy image being a lower resolution copy of the original image,

b.   modifying the selected image in accordance with the manipulation parameters, and

c.   displaying the modified selected image.

8.   The method of claim 1 further comprising storing the metadata as a file associated with the image at each of the local client computer and the remote server.

9.   The method of claim 1 wherein the metadata includes rotation information.

10.   The method of claim 1 wherein the metadata includes cropping information.

11.   The method of claim 1 wherein the metadata includes user interface state information.

12.   The method of claim 1 wherein the step of manipulating the parameters includes capturing state information defining a state of the manipulations at a predefined time and selecting a previous state at the request of the user.

13.   The method of claim 12 further comprising capturing a history of the state information and selecting any of the previous states without traversing back through each intermediary state in the history.

14.   The method of claim 1 wherein the parameter that can be manipulated can be selected from image parameters, account parameters and order parameters.

15.   The method of claim 14 wherein the image parameters include the state of the user interface.

16.   The method of claim 14 wherein the image parameters include image archival information.

17.   The method of claim 14 wherein the image parameters include annotation information.

18.   The method of claim 14 wherein the image parameters include backprint information.

19.   The method of claim 14 wherein the image parameters include order information.

20. The method of claim 19 wherein the order information includes pricing information.

21. (Amended) The method of claim 19 wherein the image parameters includes archival information.

22. The method of claim 14 further comprising defining a personal template that describes a particular configuration for the parameters for a given image and wherein the image parameters includes an identifier pointing to the personal template.

23. The method of claim 14 wherein the account parameters include verification data for the client.

24. The method of claim 14 wherein the order parameters includes envelope information.

25. The method of claim 1 wherein the synchronization step is bi-directional.

26. The method of claim 1 wherein the synchronization step includes

Checking for conflicts between metadata stored at the local client computer and the remote server; and

Upon detecting a conflict, alerting the user to the conflict.

27. The method of claim 26 further comprising receiving a selection from the user regarding the client and synchronizing the local client computer and remote sever in accordance with the selection.

28. The method of claim 26 further comprising storing two different states of the metadata at each of the local client computer and the remote server, one for each of the conflicting parameters.

29. The method of claim 26 wherein the step of alerting the user includes displaying a dialog box to the user from which a selection can be made.

30. The method of claim 1 further comprising storing on the local client computer a printer output file including profiles for different printers available through

the remote server, wherein the step of manipulating the parameters includes displaying a modified version of the original image in accordance with the manipulated parameters and using an output profile for a printer on which the image is to be outputted when transferred to the remote server.

31.   The method of claim 1 further comprising displaying on both the local client computer and the remote server a similar image metaphor for manipulating the original image.

32.   The method of claim 1 wherein the image metaphor includes an envelope for dropping selected images into when ordering.

33.   The method of claim 1 further comprising prompting the user to experience a new remote server function including loading a copy of a tool onto the local client computer during the synchronization step and displaying an icon in the user interface that alerts the user to the new functionality and includes a link to the local copy of the tool to allow the user to manipulate an image using the new functionality.

34.   The method of claim 1 further comprising storing metadata describing the manipulations without modifying the image, the metadata being stored at the computer, either the local client or the remote server, where the manipulating step is performed.

35.   The method of claim 1 wherein the local client computer is selected from the group of PDA, portable computer, kiosk, fax machine, digital camera and docking station.

36.   The method of claim 1 wherein the connection between the local client computer and remote server is wireless.

37.   The method of claim 1 wherein the synchronization step occurs at a next open session between the local client computer and the remote server.

38.   The method of claim 1 wherein the synchronization step occurs at the end of current session between the local client computer and the remote server.

BENSON et al.
Application No.: 09/679,948
Page 16

PATENT

39. The method of claim 1 wherein the synchronization step occurs in real time between the local client computer and remote server.

40. The method of claim 1 wherein the parameters include print parameters.

41. The method of claim 40 wherein the parameters include print calibration parameters.

42. The method of claim 1 wherein the parameters include display parameters.

43. A method for distributing image editing, review and ordering functions among system resources in an image-processing system, the image-processing system including a local client computer and a remote server, the method comprising:

Determining if a session is open between the local client computer and the remote server;

Capturing, at the client computer when the session is closed, metadata describing any manipulations by the user of an image;

Capturing, at the remote server when the session is opened, metadata describing manipulations of the image by the user; and

Synchronizing the metadata captured at each of the local client computer and the remote server when the session is open.

44. A method for distributing image editing, review and ordering functions among system resources in an image-processing system, the image-processing system including a local client computer and a remote server, the method comprising:

Dividing image management, archival, and printing functions among the local client computer and the remote server including performing image management at either of the local client computer and the remote server, and performing image archive and printing functions at the remote server; and

Synchronizing image management data between the local client computer and the remote server.

45.   An apparatus for manipulating a digital image comprising:

Client software for executing on a local client computer including instructions for

identifying an original image for processing at the local client computer,

uploading the original image to a remote server,

receiving a user selection to locally or remotely process the original image;

if local processing is selected, locally manipulating parameters associated with the original image including storing, on the local client computer, metadata describing the manipulations without modifying the original image,

if remote processing is selected, opening a session with the remote server; and

Remote server software for executing on the remote server including instructions for

receiving the original image,

manipulating parameters associated with the original image in accordance with instructions received from the local processor

storing metadata describing the manipulations without modifying the original image, and

at each session between the local client computer and the remote server, synchronizing the local client computer and the remote server including updating metadata for one of the local client computer and the remote server using metadata of the other.